



BEST AVAILABLE COPY

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
		Application Number	09/670918
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (use as many sheets as necessary)		Filing Date	9/29/00
		First Named Inventor	Lange et al
		Art Unit	1775
		Examiner Name	M. E. LaVilla
		Attorney Docket Number	1279-413/10311298
Sheet	1	of	1

RECEIVED  
OCT 17 2003  
TC 1700  
8/1/03  
10/23/01

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See attached Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
ML	✓	F. F. Lange, "Powder Processing Science and Technology for Increased Reliability," <i>J. Am. Ceram. Soc.</i> 72 [1], 3 (1989). (no month)		
ML	✓	D. J. Green, <i>Introduction to Mechanical Properties of Ceramics</i> (Cambridge Univ. Press, Cambridge, UK, 1998). (no month)		
ML	✓	V. K. Pujari et al., "Reliable Ceramics for Advanced Heat Engines," <i>Am. Ceram. Soc. Bull.</i> 74 [4], 86 (1995). (April)		
ML	✓	D. J. Green and R. Tandon, V. M. Sglavo, "Crack Arrest and Multiple Cracking in Glass Through the Use of Designed Residual Stress Profiles," <i>Science</i> 283, 1295 (1999) (February)		
ML	✓	M. Oechsner, C. Hillman, and F. F. Lange, "Crack Bifurcation in Laminar Ceramic Composites," <i>J. Am. Ceram. Soc.</i> 79 [7], 1834 (1996). (no month)		
ML	✓	A. J. Sánchez-Herencia, C. Pascual, J. He, and F. F. Lange, "ZrO <sub>2</sub> / ZrO <sub>2</sub> Layered Composites for Crack Bifurcation," <i>J. Am. Ceram. Soc.</i> , 82 [6], 1512 (1999). (no month)		
ML	✓	A. J. Sánchez-Herencia, L. James, and F. F. Lange, "Bifurcation in Alumina Plates Produced by a Phase Transformation in Central, Alumina/Zirconia Thin Layers," <i>J. Eur. Ceram. Soc.</i> , 20 [9] 1295 (2000). (no month)		
ML	✓	M. P. Rao, A. J. Sánchez-Herencia, G. E. Beltz, R. M. McMeeking, and F. F. Lange, "Laminar Ceramics That Exhibit a Threshold Strength," <i>Science</i> 286, 102 (1999).		
ML	✓	C. Hillman, Z. Suo, and F. F. Lange, "Cracking of Laminates Subjected to Biaxial Tensile Stresses," <i>J. Am. Ceram. Soc.</i> 79 [8], 2127 (1996). (no month)		
ML	✓	H. Tada, P. C. Paris, and G. R. Irwin, <i>The Stress Analysis of Cracks Handbook</i> , (Del Research Corp., St. Louis, MO, ed. 2, 1985), p. 5.13. (no month)		
ML	✓	R. M. McMeeking and Hbaieb K., "Optimal Threshold Strength of Laminar Ceramics," <i>Zeitschrift fuer Metalkunde</i> , 90 [12], 1031 (1999) (no month) (December)		
ML	✓	S. Ho, C. Hillman, F. F. Lange, and Z. Suo, "Surface Cracking in Layers Under Biaxial, Residual Compressive Stresses," <i>J. Am. Ceram. Soc.</i> , 78 [9] 1834-38 (1995) (no month)		
ML	✓	F. F. Lange, M. P. Rao, K. Hbaieb and R. M. McMeeking, "Ceramics that Exhibit a Threshold Strength," in <i>Ceramic Armor Materials by Design</i> , Ceramic Trans. 134, Ed. By J.W. McCauley, a. Crowson, W.A. Gooch Jr., A.M. Rajendran, S. J. Bless, K.V. Logan, M. Normandia and S. Wax, Pub. By Am. Ceram. Soc., Westerville, OH, pp. 449-510 (no date)		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	LaVilla	Date Considered	11/6/03
-----------------------	---------	--------------------	---------

01 FC:1806

180.00 DA

10/23/2003 KROTTLER 00000004 500337 09670918

Please type a plus sign (+) inside this box → +

PTO/SB/08B (10-96)  
Approved for use through 10/31/99, OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO			<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			Application Number	
			Filing Date	September 29, 2000
			First Named Inventor	Frederick F. Lange
			Group Art Unit	
			Examiner Name	
			Attorney Docket Number	1999-385-1
Sheet	1	of	1	

10825 U.S. PTO  
 09/670918  
 09/29/00

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
ML		M.P. Rao, A.J. Sanchez-Herencia, G.E. Beltz, R.M. McMeeking,	
		and F.F. Lange, "Laminar Ceramics That Exhibit A Threshold	
		Strength," Science, 1 October 1999, Volume 286, pp. 102-105.	
ML		Statement from M.P. Rao, A.J. Sanchez-Herencia, and F.F. Lange	
		to Patent Examiner concerning a non-enabling oral presentation	
		made on April 28, 1999.	

Examiner Signature		Date Considered	3/31/03
-----------------------	--	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.